

## APA z herbatą 2018

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **45**
- SRM **8.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **2 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **18.9 liter(s)** of strike water to **70.9C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (76.3%)	80 %	5
Grain	Strzegom Monachijski typ I	0.8 kg (13.6%)	79 %	16
Grain	Caraaroma	0.1 kg (1.7%)	78 %	400
Grain	Biscuit Malt	0.5 kg (8.5%)	79 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Equinox	25 g	40 min	13.1 %
Boil	Equinox	40 g	10 min	13.1 %
Aroma (end of boil)	Equinox	40 g	0 min	13.1 %
Dry Hop	Equinox	40 g	---	13.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M36 Liberty Bell Ale	Ale	Dry	10 g	Mangrove Jack's

### Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	10 min
Flavor	herbata czarna "Cytrynowy John"	30 g	Boil	0 min
Herb	herbata czarna "Cytrynowy John"	50 g	Secondary	2 day(s)